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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,385	01/30/2004	Tientch Chen	200312792-1	8388

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FORT COLLINS, CO 80527-2400

EXAMINER

TSOY, ELENA

ART UNIT	PAPER NUMBER
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1792

MAIL DATE	DELIVERY MODE
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10/09/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/769,385

Applicant(s)

CHEN ET AL.

Examiner

Elena Tsoy

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 23-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Request for Reconsideration

The Request for Reconsideration filed on September 6, 2007 has been entered.

Claims 1-37 are pending in the application. Claims 23-37 are withdrawn from consideration as directed to a non-elected invention.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-22 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al (US 6,203,899) in view of Santo et al (US 5,965,252), Abe et al (US 5,372,884) and Alexander et al (US 3,007,878) for the reasons of record set forth in paragraph 2 of the Office Action mailed on 6/21/2007.

Response to Arguments

3. Applicants' arguments filed September 6, 2007 have been fully considered but they are not persuasive.

The combination of references fails to teach modifying a pre-modified silica particle.

(A) Applicants maintain their arguments that a prima facie case of obviousness with respect to pending claims has not been met.

The Examiner respectfully disagrees with this argument. According to MPEP, to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation in the references themselves to modify the reference or to

Art Unit: 1762

combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Combination of Santo et al, Abe et al and Alexander meets all three basic criteria.

Hirose teaches cationizing silica with either cationic metal oxides or silanes. It is well settled that *combining* both treatments and a *proper sequence* of adding ingredients including claimed order (applying metal oxides first then silanes) is prima facie obvious in the absence of showing of criticality. Therefore, (i) a **combination of treatments** would be obvious to one of ordinary skill in the art; (ii) claimed **sequence of treatments** would be also obvious. Santo is applied to show that claimed order have other advantages. Thus, in contrast to Applicants argument, there is a suggestion or motivation to combine cited references.

One of ordinary skill in the art would have reasonable expectation of success because Abe et al and Alexander show that claimed method of applying metal oxides was well known in the art.

And finally, the cited prior art teaches or suggests all the claim limitations.

(B) Applicants assert that in an attempt to combine the references to meet the presently pending claims, has compared an alumina hydrate used to form a surface activated silica particulate (i.e. a coating) to an alumina hydrate particle. Therefore, Hirose, Abe et al and Alexander can be viewed as being directed to activating a silica particle with a surface activating agent, and Santo is directed to surface-treating alumina hydrate particles.

Art Unit: 1762

The argument is unconvincing. In contrast to Applicants argument, a silica **particle** of Hirose, Abe et al and Alexander that is encapsulated in an alumina hydrate surface activating agent would be a **particle** having alumina hydrate surface. Therefore, Hirose, Abe et al and Alexander can be viewed as being directed to a **particle** with alumina hydrate surface, and Santo is also directed to particle with alumina hydrate surface.

(C) Applicants assert that the actual surface chemistry can be represented according to scheme (I).

The Examiner respectfully disagrees with this argument. The Examiner takes official notice that it is a common knowledge in the art that aminoalkylethoxysilane (which is a conventional silane coupling agent) bonds to the surface having OH groups by reacting ethoxy groups with OH groups, as evidenced by Hirose that teaches that aminoethoxysilane has functional group (i.e. ethoxy group) that reactive to a silanol group (i.e. OH groups) on the surface of silica (See column 4, lines 22-26). Therefore, the actual surface chemistry is of a *different* scheme than scheme (I).

(D) All other arguments are refrased arguments of (A)-(C).

The Examiner respectfully disagrees with this argument for the reasons discussed above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

Art Unit: 1762

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Thursday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Elena Tsoy, Ph.D.
Primary Examiner
Art Unit 1762

ELENA TSOY
PRIMARY EXAMINER
ETsoy

September 28, 2007